

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

REC'D 27 MAY 2002

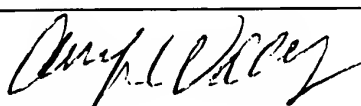
WIPO PCT

Applicant's or agent's file reference 15-555 PCT	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/US00/06848	International filing date (day/month/year) 15 MARCH 2000	Priority date (day/month/year) NONE
International Patent Classification (IPC) or national classification and IPC IPC(7): B01D 61/10 and US Cl.: 210/109		
Applicant KINETICO INCORPORATED		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 4 sheets.
☒ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority. (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).
 These annexes consist of a total of 12 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of report with regard to novelty, inventive step or industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 15 OCTOBER 2001	Date of completion of this report 01 MAY 2002
Name and mailing address of the IPEA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231	Authorized officer JOSEPH DRODGE 
Facsimile No. (703) 305-3230	Telephone No. (703)-308-0661

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/US00/06848

I. Basis of the report1. With regard to the **elements** of the international application: *☐ the international application as originally filed☒ the description:

pages (See Attached) _____, as originally filed

pages _____, filed with the demand

pages _____, filed with the letter of _____

☒ the claims: —

pages (See Attached) _____, as originally filed

pages _____, as amended (together with any statement) under Article 19

pages _____, filed with the demand

pages _____, filed with the letter of _____

☒ the drawings:

pages (See Attached) _____, as originally filed

pages _____, filed with the demand

pages _____, filed with the letter of _____

☒ the sequence listing part of the description:

pages (See Attached) _____, as originally filed

pages _____, filed with the demand

pages _____, filed with the letter of _____

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is:

☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).☐ the language of publication of the international application (under Rule 48.3(b)).☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:☐ contained in the international application in printed form.☐ filed together with the international application in computer readable form.☐ furnished subsequently to this Authority in written form.☐ furnished subsequently to this Authority in computer readable form.☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.4. ☒ The amendments have resulted in the cancellation of:☒ the description, pages NONE☒ the claims, Nos. NONE☒ the drawings, sheets/fig NONE5. ☐ This report has been drawn as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

**Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/US00/06848

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**1. statement**

Novelty (N)	Claims <u>1-13</u>	YES
	Claims <u>NONE</u>	NO
Inventive Step (IS)	Claims <u>1-13</u>	YES
	Claims <u>NONE</u>	NO
Industrial Applicability (IA)	Claims <u>1-13</u>	YES
	Claims <u>NONE</u>	NO

2. citations and explanations (Rule 70.7)

Claims 1 and 10 meet the criteria set out in PCT Article 33(2)-(3), because the prior art does not teach or fairly suggest in a system that includes a tank assembly having an outer tank wall and pressurizing region between an expandable bladder in the tank and the tank wall with a control valve device operative to effect communication of source water to the pressurizing region when dispensing and draining of such water when not dispensing, with the further characterization of the valve device having two positions which are responsive to fluid pressure at a dispensing device and also a servo valve which is responsive to the pilot valve, as recited in claims 1 and 10, respectively. BURROWS and also CLARK patent 4,997,583 are deemed to be representative of the closest prior art in that they teach such tank assembly containing bladder and pressurizing region communicating with a control valve device, however not suggesting a pilot valve and servo valve as claimed.

Claim 2 meets the criteria set forth in PCT Article 33(2)-(3), because the prior art does not teach or fairly suggest a storage device for storing treated water discharged by a water treatment unit and including a tank assembly with water tank housing and expandable bladder, defining a pressurizing region together therebetween, and also having a valve member controlling communication of source water under pressure to the pressurizing region and communication of the pressurizing region with drain, in which the source of water is water that is obtained upstream of the water treatment tank. The closest prior art is deemed to be BURROWS generally describing such water treatment unit, storage device, tank assembly and bladder, however the valve member in BURROWS teaches supplying of concentrate source water from downstream of the water treatment unit.

Claims 12 and 13 meet the criteria set out in PCT Article 33(2)-(3), because the prior art does not teach or fairly suggest a tank assembly containing an outer tank housing, an expandable bladder within the tank and a pressurizing region therebetween and also containing a control valve, such control valve having the specific features of a depending threaded segment extending (Continued on Supplemental Sheet.)

Supplemental Box

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: Boxes I - VIII

Sheet 10

1. BASIS OF REPORT:

This report has been drawn on the basis of the description,
page(s) 2-16, as originally filed.
page(s) 1, filed with the demand.
and additional amendments:
NONE

This report has been drawn on the basis of the claims,
page(s) NONE, as originally filed.
page(s) NONE, as amended under Article 19.
page(s) NONE, filed with the demand.
and additional amendments:
Pages 18-21, filed with the letter of 11 March 2002

This report has been drawn on the basis of the drawings,
page(s) NONE, as originally filed.
page(s) 1-7, filed with the demand.
and additional amendments:
NONE

This report has been drawn on the basis of the sequence listing part of the description:
page(s) NONE, as originally filed.
pages(s) NONE, filed with the demand.
and additional amendments:
NONE

V. 2. REASONED STATEMENTS - CITATIONS AND EXPLANATIONS (Continued):

into the interior of the tank housing and also a threaded retaining element threadedly received by the control valve segment and operative to capture a neck portion of the bladder between itself and an engagement surface of the lower segment.

Claims 1-13 have industrial applicability as defined by PCT Article 33(4). Claims 1-13 define apparatus having utility in the home and industrial water purification industry.

----- NEW CITATIONS -----

NONE

15-535

FLUID TREATMENT SYSTEM

Technical Field

5 The present invention relates generally to fluid treatment systems and, in particular, to a storage tank and storage tank control valve for use with a fluid treatment system, such as a reverse osmosis system.

Background Art

10 It is known to use a storage tank to store a processed fluid produced by a fluid treatment system. For example, reverse osmosis systems are used to produce potable or drinking water from water sources that contain undesirable contaminants, etc. In a typical reverse
15 osmosis system, especially in the type of reverse osmosis system used in homes, the rate at which treated water or "permeate" is produced by the system can be very low. As a result, a storage tank is used to store permeate, so that relatively large quantities can be made available
20 when the consumer opens the tap or faucet. In the past, "precharged" storage tanks are used. In this type of storage tank, a bladder is used to define a pressurized chamber, usually filled with a compressible gas, such as nitrogen. The bladder isolates the gas from the
25 processed water received by the tank. As processed water or "permeate" (in the case of a reverse osmosis system) is received by the tank, it gradually compresses the gas in the pressurized chamber. As a result, the permeate is stored under pressure, such that when the faucet is
30 opened, the pressure in the storage tank exerted by the compressed gas, forces permeate out of the tank and to the faucet.

AMENDED SHEET

communicated with a source pressure, whereby contracting forces are applied to said bladder in order to drive permeate from said bladder of said tank and to said dispensing device.

2. A storage device for storing treated water discharged by a water treatment unit, comprising:

a) a tank assembly including an outer tank housing enclosing within it, an expandable bladder;

5 b) a pressurizing region defined between an outside of said bladder and an inside of said outer tank housing;

10 c) a valve member for controlling the communication of a source water under pressure with said pressurizing region and for controlling the communication of said pressurizing region with a drain, said source of water being water obtained upstream of said water treatment unit;

15 d) a fluid pressure operated control device responsive to a dispensing device for said treated water, said control device operative to connect said source water to said pressurizing region when said dispensing device is dispensing treated water and operative to communicate said pressurizing region with said drain when
20 said dispensing device is not dispensing water.

3. The apparatus of claim 2, wherein said control device includes a pilot valve responsive to a fluid pressure at said dispensing device and movable between at least two positions and a servo valve responsive to the position of said pilot valve.

4. The apparatus of claim 3, wherein said pilot valve includes a source water port, a common port, and a drain port.

5. The apparatus of claim 4, wherein said pilot

valve further includes a piston operated land for controlling the communication between said common port and said source port and between said common port and said drain port.

6. The apparatus of claim 5, further comprising a servo valve having a source water port, a common port and a drain port.

7. The apparatus of claim 6, wherein said servo valve further includes a piston operated spool valve for controlling the communication of said common port with said source water port and said drain port, said common port and drain port being sized to permit relatively unrestricted flow of source water out of said pressurizing region of said tank assembly when said servo valve common port and servo valve drain port are cross communicated by said spool valve.

8. The apparatus of claim 7, wherein said water treatment unit comprises a reverse osmosis module having a permeate output, a source water input and a concentrate output.

9. The apparatus of claim 8, further including a post filter disposed between a supply conduit communicating with said tank assembly and said dispensing device whereby treated water dispensed from said tank assembly tank is conveyed through said post filter before being dispensed.

10. A storage system for a reverse osmosis system, comprising:

- a) a storage tank having a tank housing enclosing an elastomeric, expandable bladder;
- b) said tank housing and bladder defining therebetween a pressurizing region for receiving fluid

IPEA/US 11 MAR 2002

under pressure for exerting contracting forces on said bladder to expel permeate contained in said bladder;

10 c) a pilot valve responsive to the state of a dispensing device such that said pilot valve moves to a first position when permeate is being dispensed by said dispensing device and moves to a second position when said dispensing device is not dispensing permeate; and,

15 d) a servo valve responsive to said pilot valve and operative to communicate source water under pressure to said pressurizing region of said storage tank when said pilot valve is in its first position and operative to communicate said pressurizing region with a drain when said pilot valve is in its second position.

11. The apparatus of claim 10, wherein said pilot valve is responsive to pressure in a permeate supply line feeding said dispensing device.

12. A storage assembly for storing treated water discharged by a water treatment unit, comprising:

a) a tank assembly including an outer tank housing and enclosing within it an expandable bladder;

b) structure defining a pressurizing region defined between an outside of said bladder and an inside of said outer housing;

c) a control valve mounted to said outer tank housing;

10 d) said control valve including a depending, threaded segment extending into an interior of said tank housing; and,

15 e) a threaded retaining element threadedly receivable by said control valve segment and operative to capture a neck portion of said bladder between itself and an engagement surface defined by said lower segment.

PCT/US 00/06848
IPEA/US 11 MAR 2002

13. The apparatus of claim 12, further including a retainer bearing disposed between said retainer and said bladder neck which facilitates relative rotation between said bladder and said retainer.

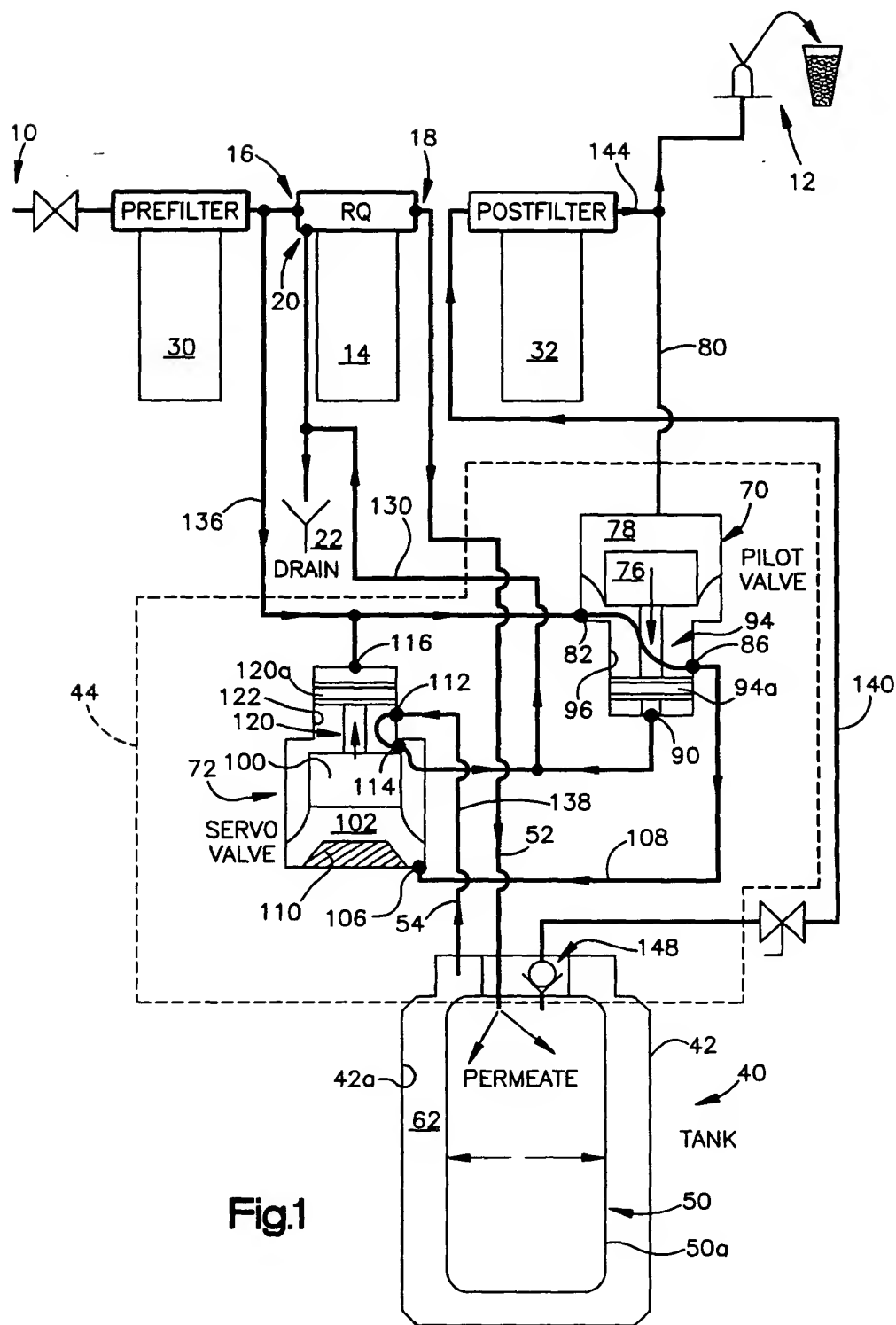


Fig.1

2/7

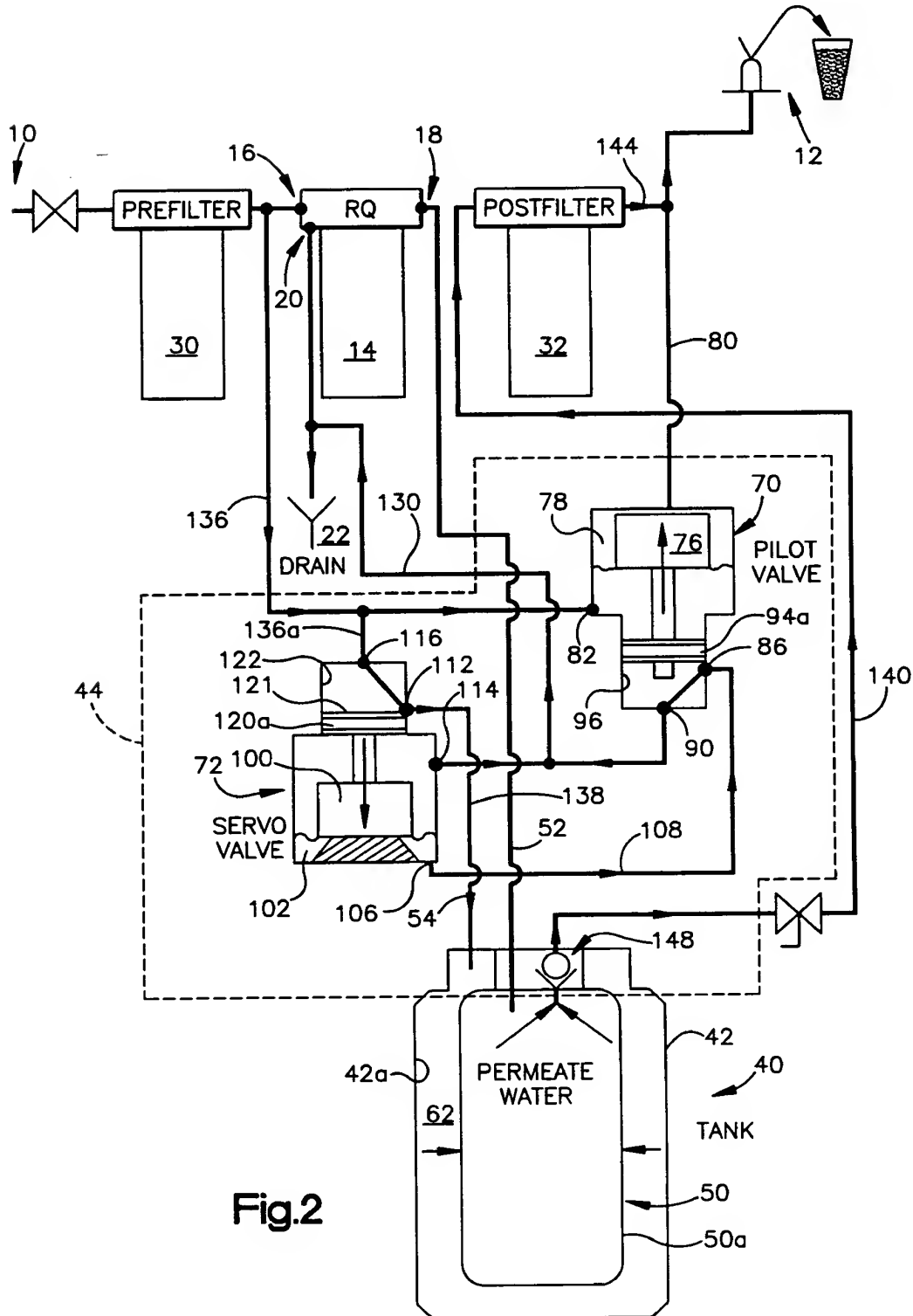


Fig.2

AMENDED SHEET

3/7

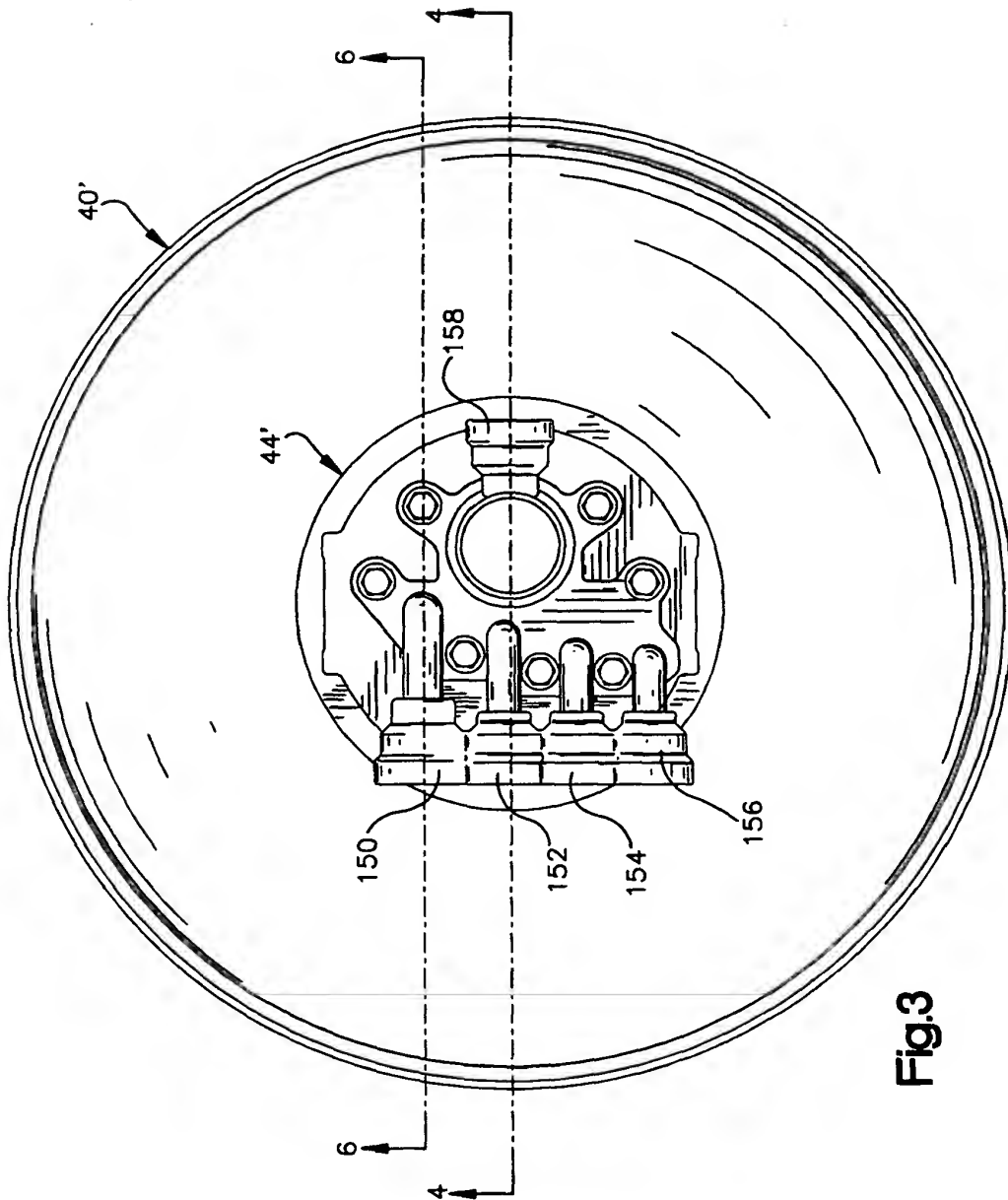


Fig.3

AMENDED SHEET

4/7

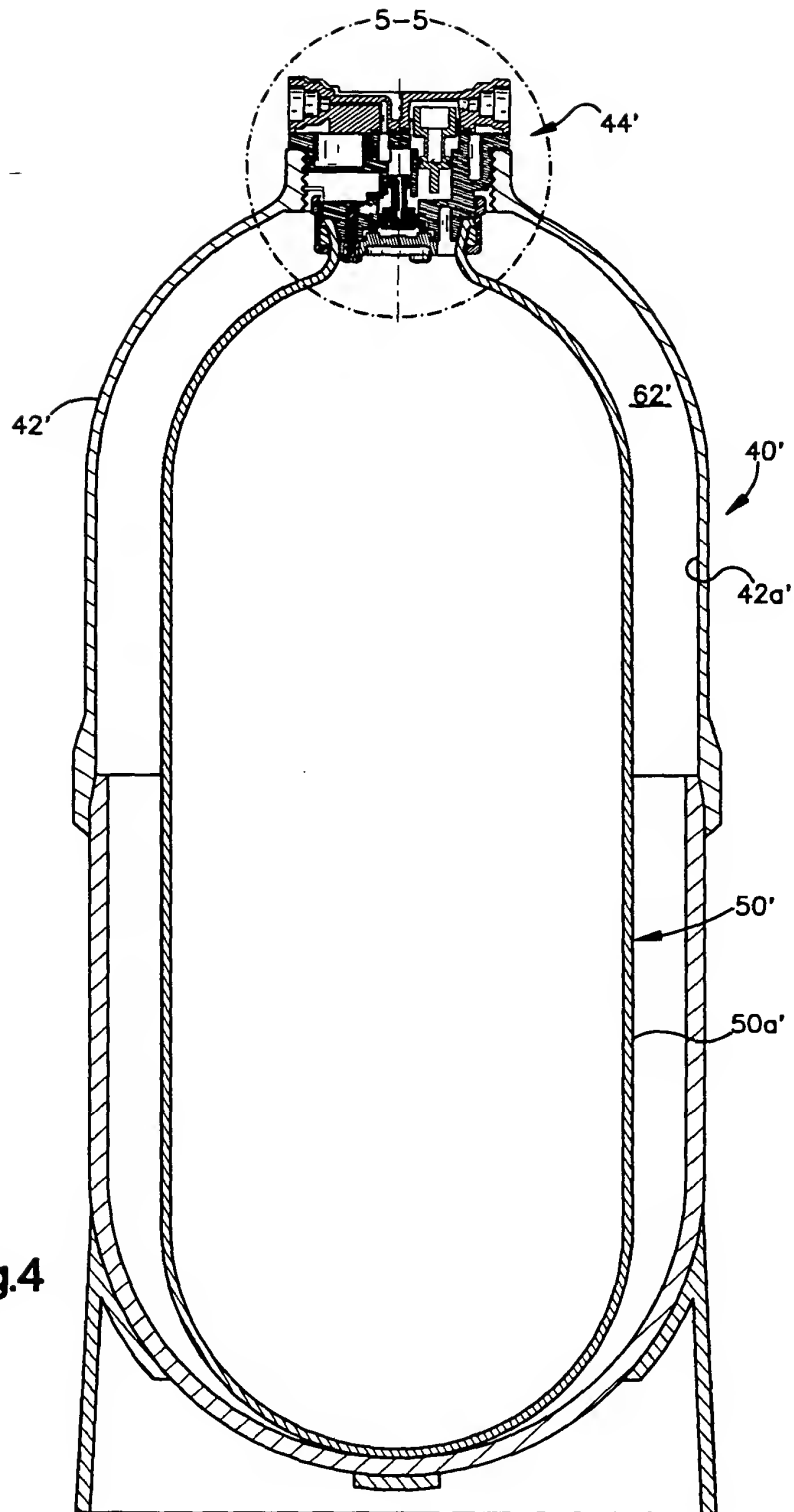


Fig.4

AMENDED SHEET

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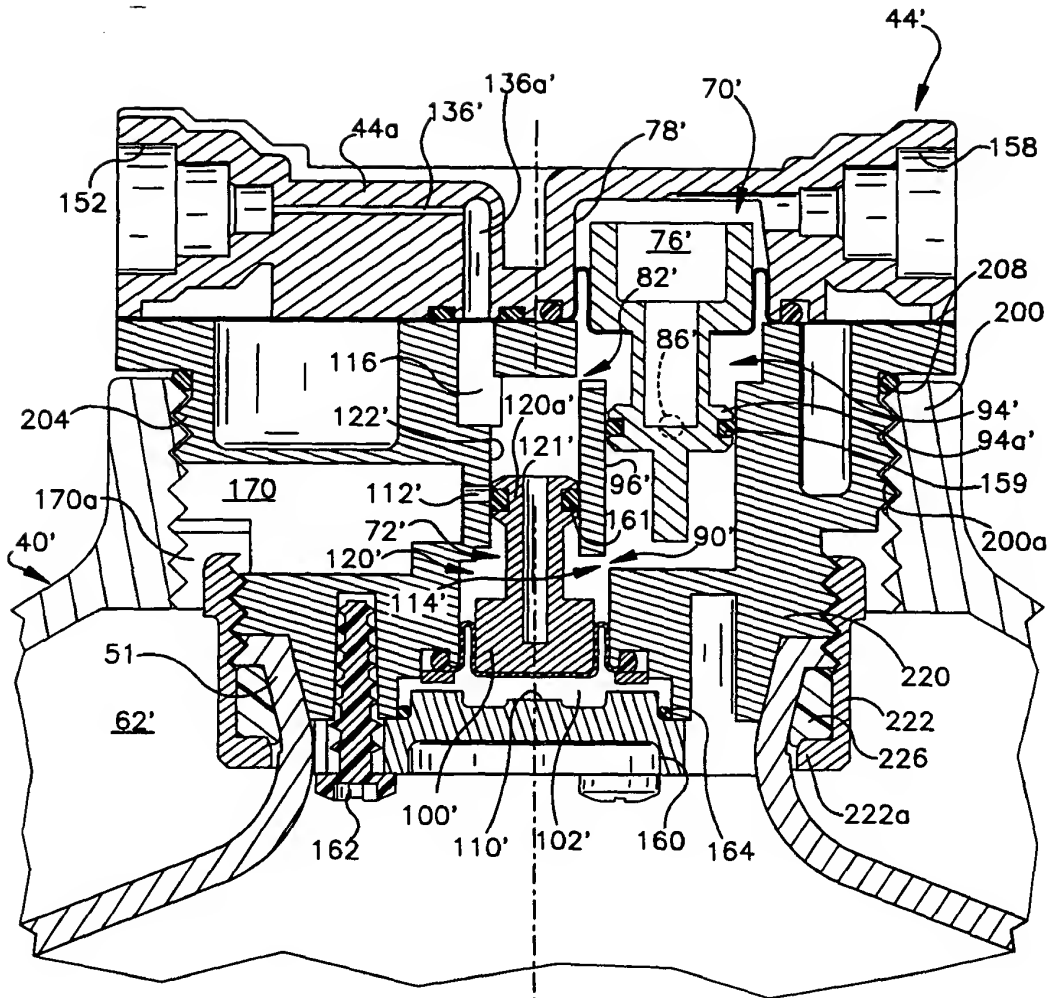


Fig.5

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6/7

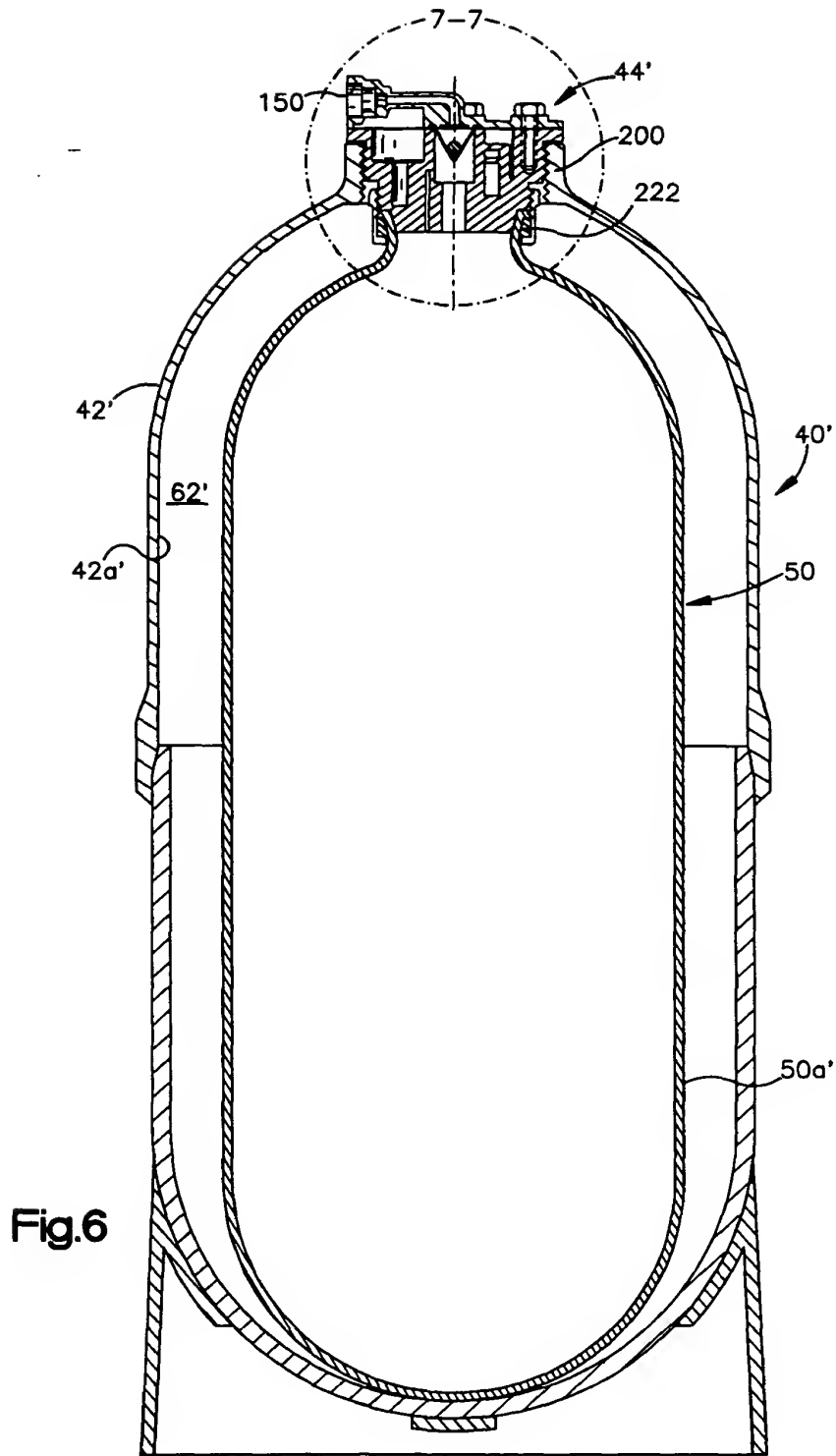


Fig.6

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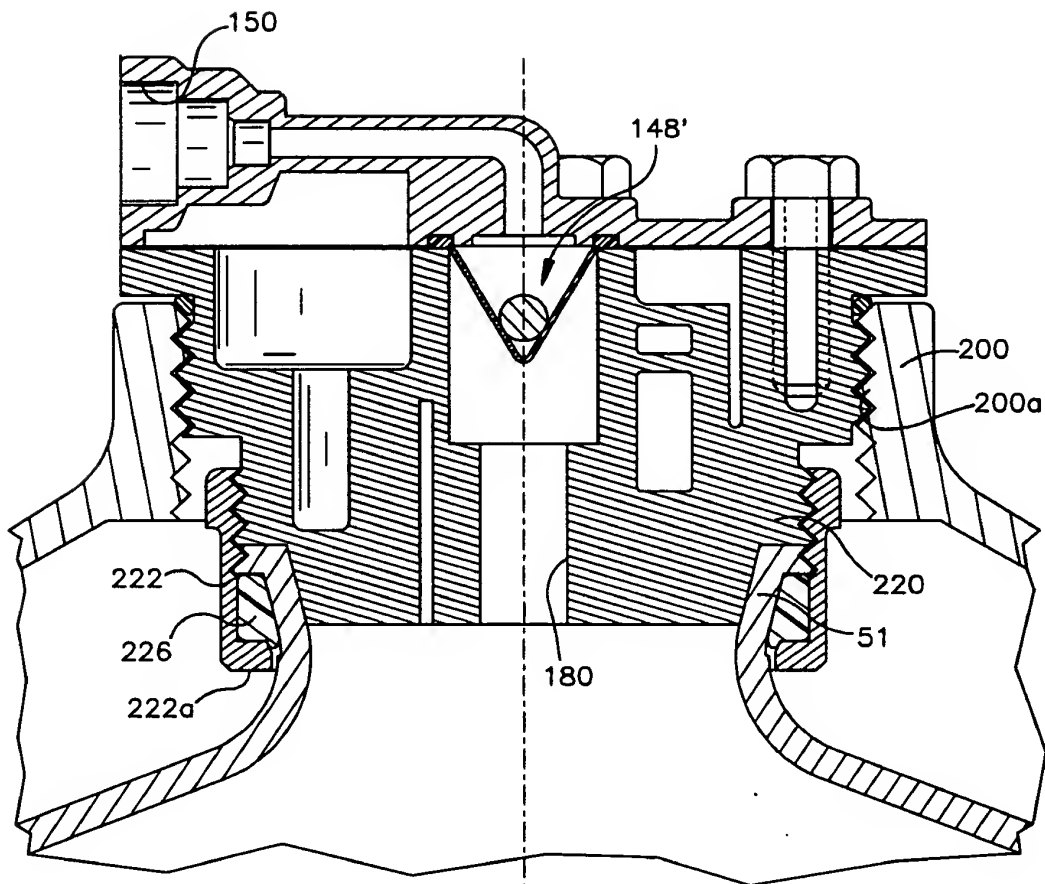


Fig.7

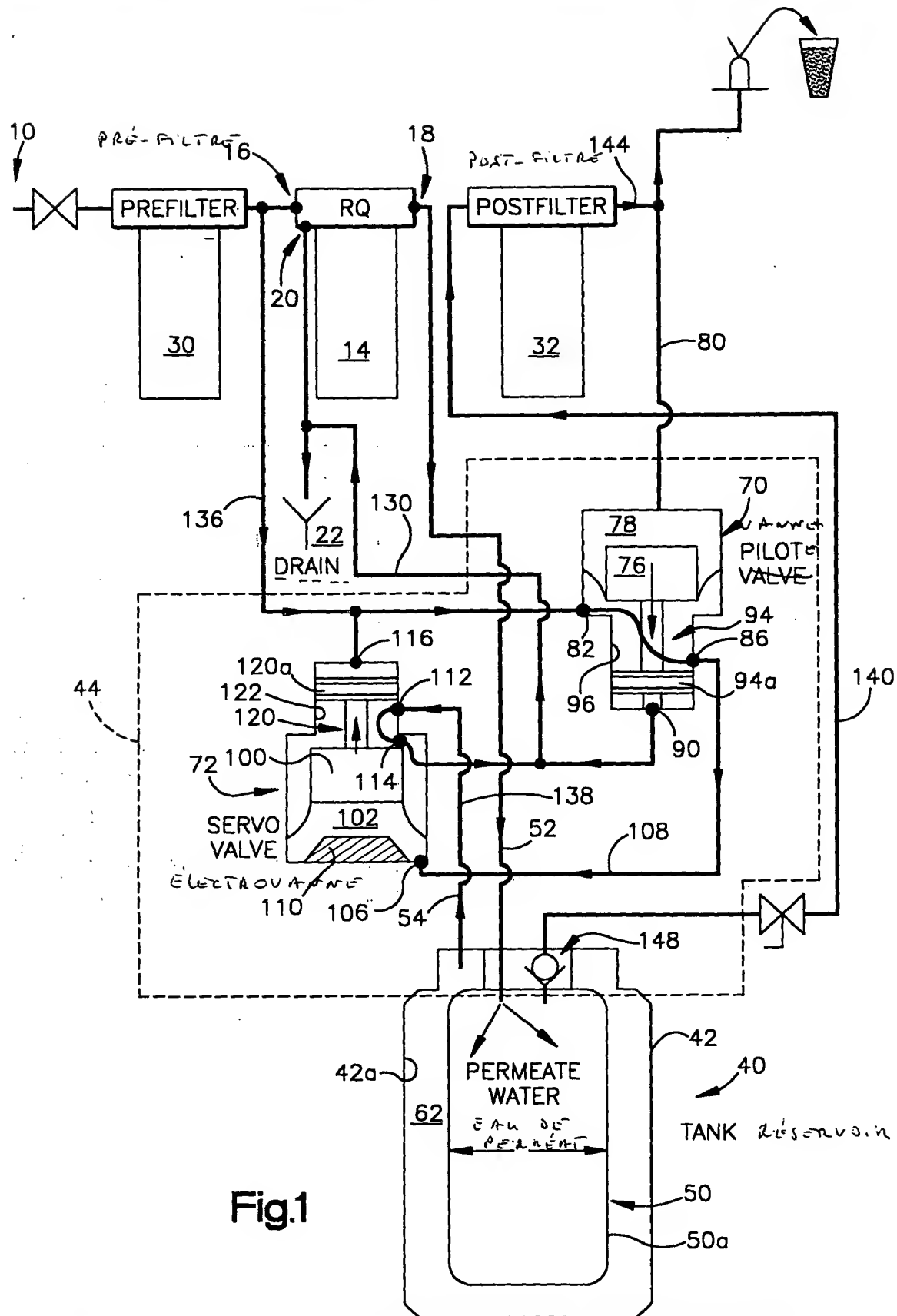


Fig.1

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 15-535 PCT	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/US00/06848	International filing date (day/month/year) 15 MARCH 2000	Priority date (day/month/year) NONE
International Patent Classification (IPC) or national classification and IPC IPC(7): B01D 61/10 and US Cl.: 210/109		
Applicant KINETICO INCORPORATED		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 4 sheets.

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These annexes consist of a total of 12 sheets.

3. This report contains indications relating to the following items:

I	<input checked="" type="checkbox"/>	Basis of the report	
II	<input type="checkbox"/>	Priority	
III	<input type="checkbox"/>	Non-establishment of report with regard to novelty, inventive step or industrial applicability	
IV	<input type="checkbox"/>	Lack of unity of invention	
V	<input checked="" type="checkbox"/>	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement	
VI	<input type="checkbox"/>	Certain documents cited	<input type="checkbox"/> contained in the international application
VII	<input type="checkbox"/>	Certain defects in the international application	<input type="checkbox"/> stated by the international examining authority
VIII	<input type="checkbox"/>	Certain observations on the international application	<input type="checkbox"/> formulated in response to the international examining authority's observations

Date of submission of the demand 15 OCTOBER 2001	Date of completion of this report 01 MAY 2002
Name and mailing address of the IPEA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231	Authorized officer JOSEPH DRODGE <i>[Signature]</i>
Facsimile No. (703) 305-3230	Telephone No. (703) 308-0661

I. Basis of the report**1. With regard to the elements of the international application:***

- ☐ the international application as originally filed
- ☒ the description:
pages _____ (See Attached) _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☒ the claims:
pages _____ (See Attached) _____, as originally filed
pages _____, as amended (together with any statement) under Article 19
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☒ the drawings:
pages _____ (See Attached) _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☒ the sequence listing part of the description:
pages _____ (See Attached) _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____

2. With regard to the language; all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.
These elements were available or furnished to this Authority in the following language _____ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in printed form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☒ The amendments have resulted in the cancellation of:

- ☒ the description, pages _____ NONE _____
- ☒ the claims, Nos. _____ NONE _____
- ☒ the drawings, sheets/fig. _____ NONE _____

5. ☐ This report has been drawn as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

**Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/US00/06848

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. statement

Novelty (N)

Claims 1-13

YES

Claims NONE

NO

Inventive Step (IS)

Claims 1-13

YES

Claims NONE

NO

Industrial Applicability (IA)

Claims 1-13

YES

Claims NONE

NO

2. citations and explanations (Rule 70.7)

Claims 1 and 10 meet the criteria set out in PCT Article 33(2)-(3), because the prior art does not teach or fairly suggest in a system that includes a tank assembly having an outer tank wall and pressurizing region between an expandable bladder in the tank and the tank wall with a control valve device operative to effect communication of source water to the pressurizing region when dispensing and draining of such water when not dispensing, with the further characterization of the valve device having two positions which are responsive to fluid pressure at a dispensing device and also a servo valve which is responsive to the pilot valve, as recited in claims 1 and 10, respectively. BURROWS and also CLARK patent 4,997,583 are deemed to be representative of the closest prior art in that they teach such tank assembly containing bladder and pressurizing region communicating with a control valve device, however not suggesting a pilot valve and servo valve as claimed.

Claim 2 meets the criteria set forth in PCT Article 33(2)-(3), because the prior art does not teach or fairly suggest a storage device for storing treated water discharged by a water treatment unit and including a tank assembly with water tank housing and expandable bladder, defining a pressurizing region together therebetween, and also having a valve member controlling communication of source water under pressure to the pressurizing region and communication of the pressurizing region with drain, in which the source of water is water that is obtained upstream of the water treatment tank. The closest prior art is deemed to be BURROWS generally describing such water treatment unit, storage device, tank assembly and bladder, however the valve member in BURROWS teaches supplying of concentrate source water from downstream of the water treatment unit.

Claims 12 and 13 meet the criteria set out in PCT Article 33(2)-(3), because the prior art does not teach or fairly suggest a tank assembly containing an outer tank housing, an expandable bladder within the tank and a pressurizing region therebetween and also containing a control valve, such control valve having the specific features of a depending threaded segment extending (Continued on Supplemental Sheet.)

NONE

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/US00/06848

Supplemental Box

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: Boxes I - VIII

Sheet 10

I. BASIS OF REPORT:

This report has been drawn on the basis of the description,
page(s) 2-16, as originally filed.
page(s) 1, filed with the demand.
and additional amendments:
NONE

This report has been drawn on the basis of the claims,
page(s) NONE, as originally filed.
page(s) NONE, as amended under Article 19.
page(s) NONE, filed with the demand.
and additional amendments:
Pages 18-21, filed with the letter of 11 March 2002

This report has been drawn on the basis of the drawings,
page(s) NONE, as originally filed.
page(s) 1-7, filed with the demand.
and additional amendments:
NONE

This report has been drawn on the basis of the sequence listing part of the description:
page(s) NONE, as originally filed.
pages(s) NONE, filed with the demand.
and additional amendments:
NONE

V. 2. REASONED STATEMENTS - CITATIONS AND EXPLANATIONS (Continued):

into the interior of the tank housing and also a threaded retaining element threadedly received by the control valve segment and operative to capture a neck portion of the bladder between itself and an engagement surface of the lower segment.

Claims 1-13 have industrial applicability as defined by PCT Article 33(4). Claims 1-13 define apparatus having utility in the home and industrial water purification industry.

----- NEW CITATIONS -----
NONE

25

30

nitrogen, and
processed with
a "pre-treatment"
is received by
in the pressure
stored under
opened, the
compressed gas
the faucet.

PATENT COOPERATION TREATY

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To: JOHN R. HLAVKA
WATTS, HOFFMANN, FISHER & HEINKE CO.,
L.P.A.
P.O. BOX 99889
CLEVELAND OH 44199-0889

PCT

NOTIFICATION OF TRANSMITTAL OF INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Rule 71.1)

Date of Mailing (day/month/year) 22 MAY 2002	
Applicant's or agent's file reference 15-535 PCT	IMPORTANT NOTIFICATION
International application No. PCT/US00/06848	International filing date (day/month/year) 15 MARCH 2000
Priority Date (day/month/year) NONE	
Applicant KINETICO INCORPORATED	

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.
4. REMINDER

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

Name and mailing address of the IPEA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231	Authorized officer JOSEPH DRODGE
Facsimile No. (703) 305-3230	Telephone No. (703) 305-0661

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US00/06848

A. CLASSIFICATION OF SUBJECT MATTER IPC(7) :B01D 61/10 US CL :210/109 According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) U.S. : 210/109, 110, 116, 134, 195.2, 257.2, 259, 321.65 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5,662,793 A (BEALL JR) 02 September 1997, see entire document	1-11
Y	US 4,997,553 A (CLACK) 05 March 1991, see entire document	1-12
Y	US 4,776,952 A (BURROWS) 11 October 1988, see entire document	7-9, 12
Y	US 4,705,625 A (HART JR) 10 November 1987, see entire document	9
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> See patent family annex.		
* "A" "E" "L" "O" "P"	Special categories of cited documents: document defining the general state of the art which is not considered to be of particular relevance earlier document published on or after the international filing date document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) document referring to an oral disclosure, use, exhibition or other means document published prior to the international filing date but later than the priority date claimed	"T" "X" "Y" "Z" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art document member of the same patent family
Date of the actual completion of the international search 30 MAY 2000		Date of mailing of the international search report 27 JUN 2000
Name and mailing address of the ISA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231 Facsimile No. (703) 305-3230		Authorized officer JOSEPH DRODGE Telephone No. (703)-308-0661

PATENT COOPERATION TREATY

PCT

NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Commissioner
US Department of Commerce
United States Patent and Trademark
Office, PCT
2011 South Clark Place Room
CP2/5C24
Arlington, VA 22202
ETATS-UNIS D'AMERIQUE

in its capacity as elected Office

Date of mailing (day/month/year) 03 December 2001 (03.12.01)	
International application No. PCT/US00/06848	Applicant's or agent's file reference 15-535 PCT
International filing date (day/month/year) 15 March 2000 (15.03.00)	Priority date (day/month/year)
Applicant HALEMBA, Peter et al	

1. The designated Office is hereby notified of its election made:



in the demand filed with the International Preliminary Examining Authority on:

15 October 2001 (15.10.01)



in a notice effecting later election filed with the International Bureau on:

2. The election ☒ was

was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer Zakaria EL KHODARY
Facsimile No.: (41-22) 740.14.35	Telephone No.: (41-22) 338.83.38